

sending an Interview Summary mailed April 4, 2005 confirming the telephonic interviews discussed above.

In section 4 on pages 2 and 3, the Office Action provisionally rejects claims 1-17 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3 and 15 of co-pending Application No. 10/655,304, claims 1 and 11 of co-pending Application No. 10/654,432, and claims 1, 11 and 12 of co-pending Application No. 10/657,108.

As worded, Applicant is confused regarding the exact nature of the provisional rejection. If the statement of the rejection above is not an accurate statement of the rejection in the Office Action, Applicant respectfully requests that the rejection be reworded in the next Office Action.

This rejection is respectfully traversed. Pending claims 1-19 are patentably distinct from all of the claims upon which the provisional rejection is based as apparent from an inspection of the specific differences in the features of the respective claims. Applicant holds in abeyance a more specific traversal pending the allowance of one or more of the pending applications upon which the provisional rejection is based.

In section 5 on page 4, the Office Action rejects claim 1 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,603,429 to Bancroft et al. (hereinafter "Bancroft"). This rejection is respectfully traversed.

Claim 1 recites that, "a distance between said planar element and said ground pattern is gradually increased to become saturated." Claim 10 contains a similar recitation. Bancroft does not disclose, teach or suggest a saturation of a distance between a planar element and a ground pattern for at least the reasons discussed below.

The distance between a planar element and a ground pattern directly affects the characteristics of an antenna. Because of these effects, it is highly desirable to saturate the

distance between the planar element and the ground pattern in order to achieve certain desirable characteristics of the antenna.

Bancroft discloses that the sides of the element 18 are straight lines. As such, a distance between the planar element and the ground pattern in Bancroft, though increased, does not become saturated. For at least this reason, claim 1 is not anticipated by Bancroft.

For at least the foregoing reasons, it is respectfully requested that the rejection of claim 1 as being anticipated by Bancroft be withdrawn.

In section 7 on page 5, the Office Action rejects claims 2 and 10 under 35 U.S.C. §103(a) as being unpatentable over Bancroft in view of U.S. Patent No. 4,151,532 to Kaloi et al. (hereinafter "Kaloi") or U.S. Patent No. 4,605,012 to Ringeisen et al. (hereinafter "Ringeisen"). This rejection is respectfully traversed.

Claim 2 is allowable based at least on its dependence from claim 1 for the reasons stated above in connection with the rejection of claim 1. Because claim 10 recites the same subject matter argued above in connection with the rejection of claim 1, claim 10 is also allowable over Bancroft for the reasons stated above in connection with the rejection of claim 1 based on Bancroft. Kaloi and Ringeisen fail to overcome the deficiencies described above in Bancroft.

Claim 1, from which claim 2 depends, recites that the ground pattern is "juxtaposed with said planar element".

Further regarding Kaloi, the Summary of the Invention discloses the "twin electric microstrip dipole antennas are a family of new microstrip antennas. The twin electric microstrip dipole antennas consist of thin, electrically conducting rectangular shaped elements formed on both sides of a dielectric substrate . . ." (Emphasis added). Therefore, Kaloi does not show any antennas in which the ground pattern and the planar element are juxtaposed. That is, the radiation principle of Kaloi is completely different from the subject

matter of claim 1, from which claim 2 depends, and Bancroft. In addition to Kaloi, Ringeisen also discloses that an antenna has the same structure as Kaloi. That is, the first conductor 3 and the second conductor 4 are provided on respective sides of the printed circuit board 1 as shown in Fig. 3. Therefore, the radiation principle of Ringeisen is completely different from the subject matter of claim 1, from which claim 2 depends, and Bancroft.

Because the radiation principle is completely different between Bancroft and Kaloi or Ringeisen, there is no motivation to combine the respective disclosures or teachings of those references. The Office Action states the motivation for combining the references would have been to provide a different shape of the antenna element in order to have a variety of different purposes and circumstances, citing Kaloi. However, the cited portion in Kaloi means that the different shape of the antenna element can be used in "the microstrip antenna". There is no evidence to indicate that this teaching in Kaloi can be applied to another type of antenna. Normally, because the coupling between the ground pattern and the antenna element is very important, it is impossible to simply apply the microstrip antenna to another type of antenna.

For at least the foregoing reasons, it is respectfully requested that the rejection of claims 2 and 10 as being unpatentable over Bancroft in view of Kaloi or Ringeisen be withdrawn.

In section 8 on pages 6 and 7, the Office Action rejects claims 3-9 and 11-17 under 35 U.S.C. §103(a) as being unpatentable over Bancroft and Ringeisen in view of U.S. Patent No. 6,747,605 to Lebaric et al. (hereinafter "Lebaric"). This rejection is respectfully traversed.

Claim 3 is allowable based at least on its dependence from claims 1 and 2 for the reasons stated above in connection with the rejections of claims 1 and 2. Lebaric fails to overcome the deficiencies in Bancroft, Kaloi and Ringeisen described above in connection with the rejections of claims 1 and 2.

Claim 11 is allowable based at least on its dependence from claim 10 for the reasons stated above in connection with the rejection of claim 10.

Further regarding Lebaric, Lebaric discloses a dipole antenna. Therefore, the radiation principles are respectively different among Bancroft, Kaloi or Ringeisen, and Lebaric. Therefore, there is no motivation to combine the respective disclosure of these references.

The ground pattern in claim 3 (and claims 18 and 19) does not correspond to balun structure 14 in Lebaric. Because the dipoles 2A, 4A, 6A, and 8A are electrically connected via the feed structure 10 with the balun structure 14, the dipoles 2A, 4A, 6A, and 8A and feed structure 10 are grounded in addition to the balun structure 14 in Lebaric. Therefore, the grounded elements in Lebaric are NOT juxtaposed with the dipoles in Lebaric in the top view.

Further, the Office Action states "the motivation for doing so would have been to provide resonant element in order to have higher gain." However, providing a resonant element in claim 3 (and claims 18 and 19) is to realize a dual band antenna. Therefore, the Office Action's argument does not match the object of the subject matter of claim 3 (and claims 18 and 19).

Furthermore, the Office Action alleges that "Bancroft suggests a second antenna element". However, the cited portion of Bancroft indicates that "In some embodiments, the opening formed in the antenna element is modified by partially filling it with a second antenna element . . ." (Emphasis added). This embodiment is illustrated in Fig. 1D of Bancroft. As shown in Fig. 1D, there is no contact point of the elements 18 and 54. In this claim, as shown in Figs. 3 and 4 of this application, the resonant element is connected to the planar element without any opening in the planar element.

Therefore, there is no motivation or reason to combine the teachings of Bancroft and Kaloi or Ringeisen and Lebaric.

Claims 4-9 and 12-17 are allowable based at least on their dependence from claims 3 and 11 for the reasons stated above in connection with claims 3 and 11.

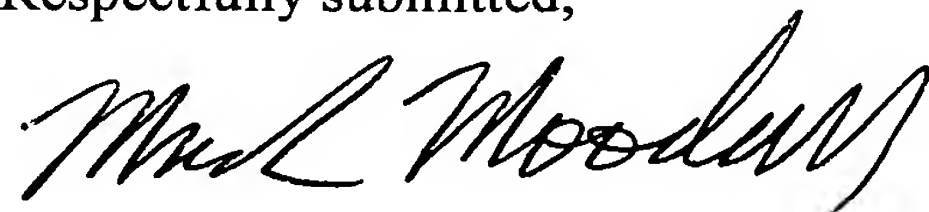
For at least the foregoing reasons, it is respectfully requested that the rejection of claims 3-9 and 11-17 as being unpatentable over Bancroft and Ringeisen in view of Lebaric be withdrawn.

Claims 18 and 19, though unexamined and thus not rejected, are allowable for reasons similar to the reasons stated above in connection with the examined and rejected claims. Particularly, similarities between claims 18 and 19 and the arguments above in connection with the rejection of claim 3 should be apparent.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-19 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance, the Examiner is invited to contact Applicant's undersigned representative at the telephone number set forth below.

Respectfully submitted,



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Date: April 11, 2005

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